CLAIMS:

1. A compression seal for an expansion joint, comprising:

a compressible sealing portion having elastic membranes; and

at least a lateral wing extending from the compressible sealing portion, wherein the lateral wing has a thickness that is larger than a thickness of the elastic membranes, and wherein the compressible sealing portion and the lateral wing form structurally integrated parts of a one-piece extruded material.

2. The compression seal of claim 1, wherein the thickness of the lateral wing is at least about one half of an inch.

3. The compression seal of claim 1, wherein the extruded material comprises ethylene propylene terpolymers.

4. The compression seal of claim 1, wherein the extruded material comprises EPDM rubber.

5. The compression seal of claim 1, wherein the compressible sealing portion comprises longitudinal tubes.

6. The compression seal of claim 1, wherein the compressible sealing portion comprises an elastic accordion-like membrane structure.

7. The compression seal of claim 1, wherein the lateral wing comprises longitudinal channels.

8. The compression seal of claim 1, wherein the lateral wing comprises grooved surfaces.

9. The compression seal of claim 1 wherein the lateral wing is hinged from the compressible sealing portion.

10. The compression seal of claim 1, wherein cross sections of the compression seal along its length have substantially the same structural configuration.

11. An expansion joint system for use in a concrete structure, the system comprising:

an expansion joint spacing between adjacent concrete elements of the concrete structure;

a one-piece compression seal having a compressible sealing portion made of elastic membranes and at least a lateral load-bearing wing extending from the compressible sealing portion, wherein the lateral load-bearing wing has a thickness that is larger than a thickness of the elastic membranes; and

a blockout region disposed in the adjacent concrete elements, wherein the blockout region is adapted to receive the lateral load-bearing wing,

wherein the compressible sealing portion is inserted in the expansion joint spacing and wherein a surface of the lateral load-bearing wing is bonded to a surface of the blockout region.

12. The expansion joint system of claim 11, wherein the depth of the blockout region is about the same as or slightly greater than the thickness of the lateral load-bearing wing.

13. The expansion joint system of claim 11, wherein the thickness of the lateral load-bearing wing is at least about one half of an inch.

14. The expansion joint system of claim 11, wherein the surface of the lateral load-bearing wing is bonded to the surface of the blockout region by adhesives.

15. The expansion joint system of claim 11, wherein the surface of the lateral load-bearing wing is bonded to the surface of the blockout region by masonry anchoring bolts.

16. The expansion joint system of claim 11, wherein the surface of the lateral load-bearing wing bonded to the surface of the blockout region comprises a plurality of grooves.

17. The expansion joint system of claim 11, wherein the one-piece compression seal comprises extruded ethylene propylene terpolymers.

18. The expansion joint system of claim 11, wherein the one-piece compression seal comprises extruded EPDM rubber.

19. The expansion joint system of claim 11, wherein the compressible sealing portion comprises longitudinal tubes.

20. The expansion joint system of claim 11, wherein the compressible sealing portion comprises an elastic accordion-like membrane structure.

21. The expansion joint system of claim 11, wherein the lateral wing comprises longitudinal channels.

22. The expansion joint system of claim 11, wherein the lateral wing is hinged from the compressible sealing portion.

23. The expansion joint system of claim 11, wherein cross sections of the compression seal along its length have substantially the same structural configuration.

24. The expansion joint system of claim 11, wherein the adjacent concrete elements comprise a floor slab and a vertical wall, wherein the compressible sealing portion comprises a substantially vertical sidewall, and wherein the sidewall is bonded to a surface of the vertical wall.

25. The expansion joint system of claim 11, wherein the adjacent concrete elements comprise stepped concrete slabs having a horizontal step portion and a vertical riser portions, and wherein the one-piece compression seal comprises a horizontal section bridging the horizontal step portions and a vertical section bridging the vertical riser portions, and wherein the lateral load-bearing wing is discontinuous by a cut between horizontal section and the vertical section.